

# SAFETY DATA SHEET



PicoMaxx High Fidelity PCR System, Part Number 600420

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**Product name** : PicoMaxx High Fidelity PCR System, Part Number 600420  
**Part No. (Kit)** : 600420  
**Part No.** : PicoMaxx High Fidelity PCR System 600420-51  
10X PicoMaxx Reaction Buffer 600420-52

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	
Analytical reagent.	
PicoMaxx High Fidelity PCR System	0.04 ml (100 U 2.5 U/μl)
10X PicoMaxx Reaction Buffer	1 ml

### 1.3 Details of the supplier of the safety data sheet

Agilent Technologies Manufacturing GmbH & Co. KG  
Hewlett-Packard-Str. 8  
76337 Waldbronn  
Germany  
0800 603 1000

**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +(44)-870-8200418

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : PicoMaxx High Fidelity PCR System Mixture  
10X PicoMaxx Reaction Buffer Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

**Ingredients of unknown toxicity** : PicoMaxx High Fidelity PCR System Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 30 - 60%  
10X PicoMaxx Reaction Buffer Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 1 - 10%  
Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 10 - 30%  
Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 1 - 10%

**Ingredients of unknown ecotoxicity** : 10X PicoMaxx Reaction Buffer Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 2%

See Section 16 for the full text of the H statements declared above.

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## SECTION 2: Hazards identification

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

<b>Signal word</b>	: PicoMaxx High Fidelity PCR System	No signal word.
	: 10X PicoMaxx Reaction Buffer	No signal word.
<b>Hazard statements</b>	: PicoMaxx High Fidelity PCR System	No known significant effects or critical hazards.
	: 10X PicoMaxx Reaction Buffer	No known significant effects or critical hazards.
<b>Precautionary statements</b>		
<b>Prevention</b>	: PicoMaxx High Fidelity PCR System	Not applicable.
	: 10X PicoMaxx Reaction Buffer	Not applicable.
<b>Response</b>	: PicoMaxx High Fidelity PCR System	Not applicable.
	: 10X PicoMaxx Reaction Buffer	Not applicable.
<b>Storage</b>	: PicoMaxx High Fidelity PCR System	Not applicable.
	: 10X PicoMaxx Reaction Buffer	Not applicable.
<b>Disposal</b>	: PicoMaxx High Fidelity PCR System	Not applicable.
	: 10X PicoMaxx Reaction Buffer	Not applicable.
<b>Hazardous ingredients</b>	: PicoMaxx High Fidelity PCR System	Not applicable.
	: 10X PicoMaxx Reaction Buffer	Not applicable.
<b>Supplemental label elements</b>	: PicoMaxx High Fidelity PCR System	Not applicable.
	: 10X PicoMaxx Reaction Buffer	Safety data sheet available on request.
<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	: PicoMaxx High Fidelity PCR System	Not applicable.
	: 10X PicoMaxx Reaction Buffer	Not applicable.
<b>Special packaging requirements</b>		
<b>Tactile warning of danger</b>	: PicoMaxx High Fidelity PCR System	Not applicable.
	: 10X PicoMaxx Reaction Buffer	Not applicable.

### 2.3 Other hazards

<b>Other hazards which do not result in classification</b>	: PicoMaxx High Fidelity PCR System	None known.
	: 10X PicoMaxx Reaction Buffer	None known.

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## SECTION 3: Composition/information on ingredients

**3.1 Substances** : PicoMaxx High Fidelity PCR System Mixture  
10X PicoMaxx Reaction Buffer Mixture

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
<b>PicoMaxx High Fidelity PCR System</b> Glycerol	REACH #: Annex V EC: 200-289-5 CAS: 56-81-5	≥50 - ≤75	Not classified.	[2]
Poly(oxy-1,2-ethanediyl), .alpha.-[ (1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	CAS: 9036-19-5	<1	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411	[1] [5]
<b>10X PicoMaxx Reaction Buffer</b> Trometamol	EC: 201-064-4 CAS: 77-86-1	<10	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335  <b>See Section 16 for the full text of the H statements declared above.</b>	[1]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

### Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern
- [6] Additional disclosure due to company policy

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

<b>Eye contact</b>	: PicoMaxx High Fidelity PCR System	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	10X PicoMaxx Reaction Buffer	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
<b>Inhalation</b>	: PicoMaxx High Fidelity PCR System	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	10X PicoMaxx Reaction Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
<b>Skin contact</b>	: PicoMaxx High Fidelity PCR System	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	10X PicoMaxx Reaction Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

## SECTION 4: First aid measures

<b>Ingestion</b>	: PicoMaxx High Fidelity PCR System	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	10X PicoMaxx Reaction Buffer	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
<b>Protection of first-aiders</b>	: PicoMaxx High Fidelity PCR System	No action shall be taken involving any personal risk or without suitable training.
	10X PicoMaxx Reaction Buffer	No action shall be taken involving any personal risk or without suitable training.

### 4.2 Most important symptoms and effects, both acute and delayed

#### Potential acute health effects

<b>Eye contact</b>	: PicoMaxx High Fidelity PCR System	No known significant effects or critical hazards.
	10X PicoMaxx Reaction Buffer	No known significant effects or critical hazards.
<b>Inhalation</b>	: PicoMaxx High Fidelity PCR System	No known significant effects or critical hazards.
	10X PicoMaxx Reaction Buffer	No known significant effects or critical hazards.
<b>Skin contact</b>	: PicoMaxx High Fidelity PCR System	No known significant effects or critical hazards.
	10X PicoMaxx Reaction Buffer	No known significant effects or critical hazards.
<b>Ingestion</b>	: PicoMaxx High Fidelity PCR System	No known significant effects or critical hazards.
	10X PicoMaxx Reaction Buffer	No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

<b>Eye contact</b>	: PicoMaxx High Fidelity PCR System	No specific data.
	10X PicoMaxx Reaction Buffer	No specific data.
<b>Inhalation</b>	: PicoMaxx High Fidelity PCR System	No specific data.
	10X PicoMaxx Reaction Buffer	No specific data.
<b>Skin contact</b>	: PicoMaxx High Fidelity PCR System	No specific data.
	10X PicoMaxx Reaction Buffer	No specific data.
<b>Ingestion</b>	: PicoMaxx High Fidelity PCR System	No specific data.
	10X PicoMaxx Reaction Buffer	No specific data.

### 4.3 Indication of any immediate medical attention and special treatment needed

**PicoMaxx High Fidelity PCR System, Part Number 600420**

## SECTION 4: First aid measures

<b>Notes to physician</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
<b>Specific treatments</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	No specific treatment. No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	None known. None known.

### 5.2 Special hazards arising from the substance or mixture

<b>Hazards from the substance or mixture</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst.
<b>Hazardous combustion products</b>	: PicoMaxx High Fidelity PCR System  10X PicoMaxx Reaction Buffer	Decomposition products may include the following materials:  carbon dioxide carbon monoxide Decomposition products may include the following materials:  carbon dioxide carbon monoxide nitrogen oxides sulfur oxides halogenated compounds metal oxide/oxides

### 5.3 Advice for firefighters

<b>Special precautions for fire-fighters</b>	: PicoMaxx High Fidelity PCR System  10X PicoMaxx Reaction Buffer	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
<b>Special protective equipment for fire-fighters</b>	: PicoMaxx High Fidelity PCR System  10X PicoMaxx Reaction Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	: PicoMaxx High Fidelity PCR System	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
	10X PicoMaxx Reaction Buffer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
<b>For emergency responders</b>	: PicoMaxx High Fidelity PCR System	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	10X PicoMaxx Reaction Buffer	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

### 6.2 Environmental precautions

: PicoMaxx High Fidelity PCR System	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
10X PicoMaxx Reaction Buffer	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### 6.3 Methods and material for containment and cleaning up

<b>Methods for cleaning up</b>	: PicoMaxx High Fidelity PCR System	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	10X PicoMaxx Reaction Buffer	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

### 6.4 Reference to other sections

: See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.
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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

<b>Protective measures</b>	: PicoMaxx High Fidelity PCR System	Put on appropriate personal protective equipment (see Section 8).
	10X PicoMaxx Reaction Buffer	Put on appropriate personal protective equipment (see Section 8).
<b>Advice on general occupational hygiene</b>	: PicoMaxx High Fidelity PCR System	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	10X PicoMaxx Reaction Buffer	Eating, drinking and smoking should be prohibited in areas



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## SECTION 7: Handling and storage

Buffer	where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
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### 7.2 Conditions for safe storage, including any incompatibilities

<b>Storage</b>	: PicoMaxx High Fidelity PCR System	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
	10X PicoMaxx Reaction Buffer	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### 7.3 Specific end use(s)

<b>Recommendations</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Industrial applications, Professional applications. Industrial applications, Professional applications.
<b>Industrial sector specific solutions</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Not applicable. Not applicable.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
PicoMaxx High Fidelity PCR System Glycerol	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011).</b> TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Mist

<b>Recommended monitoring procedures</b>	: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
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## SECTION 8: Exposure controls/personal protection

### DNELs/DMELs

No DNELs/DMELs available.

### PNECs

No PNECs available

## 8.2 Exposure controls

**Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

### Skin protection

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

<b>Physical state</b>	: PicoMaxx High Fidelity PCR System	Liquid.
	10X PicoMaxx Reaction Buffer	Liquid.
<b>Colour</b>	: PicoMaxx High Fidelity PCR System	Not available.
	10X PicoMaxx Reaction Buffer	Not available.
<b>Odour</b>	: PicoMaxx High Fidelity PCR System	Not available.
	10X PicoMaxx Reaction Buffer	Not available.



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**SECTION 9: Physical and chemical properties**

<b>Odour threshold</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Not available. Not available.
<b>pH</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	8 8.83
<b>Melting point/freezing point</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Not available. Not available.
<b>Initial boiling point and boiling range</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Not available. Not available.
<b>Flash point</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Not available. Not available.
<b>Evaporation rate</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Not available. Not available.
<b>Flammability (solid, gas)</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Not applicable. Not applicable.
<b>Upper/lower flammability or explosive limits</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Not available. Not available.
<b>Vapour pressure</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Not available. Not available.
<b>Vapour density</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Not available. Not available.
<b>Relative density</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Not available. Not available.
<b>Solubility(ies)</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water.
<b>Partition coefficient: n-octanol/water</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Not available. Not available.
<b>Auto-ignition temperature</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	Not available. Not available.

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## SECTION 9: Physical and chemical properties

<b>Decomposition temperature</b>	: PicoMaxx High Fidelity PCR System	Not available.
	10X PicoMaxx Reaction Buffer	Not available.
<b>Viscosity</b>	: PicoMaxx High Fidelity PCR System	Not available.
	10X PicoMaxx Reaction Buffer	Not available.
<b>Explosive properties</b>	: PicoMaxx High Fidelity PCR System	Not available.
	10X PicoMaxx Reaction Buffer	Not available.
<b>Oxidising properties</b>	: PicoMaxx High Fidelity PCR System	Not available.
	10X PicoMaxx Reaction Buffer	Not available.

### 9.2 Other information

No additional information.

## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	: PicoMaxx High Fidelity PCR System	No specific test data related to reactivity available for this product or its ingredients.
	10X PicoMaxx Reaction Buffer	No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	: PicoMaxx High Fidelity PCR System	The product is stable.
	10X PicoMaxx Reaction Buffer	The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	: PicoMaxx High Fidelity PCR System	Under normal conditions of storage and use, hazardous reactions will not occur.
	10X PicoMaxx Reaction Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	: PicoMaxx High Fidelity PCR System	No specific data.
	10X PicoMaxx Reaction Buffer	No specific data.
<b>10.5 Incompatible materials</b>	: PicoMaxx High Fidelity PCR System	May react or be incompatible with oxidising materials.
	10X PicoMaxx Reaction Buffer	May react or be incompatible with oxidising materials.
<b>10.6 Hazardous decomposition products</b>	: PicoMaxx High Fidelity PCR System	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	10X PicoMaxx Reaction Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
<b>PicoMaxx High Fidelity PCR System</b> Poly(oxy-1,2-ethanediyl), . alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-. omega.-hydroxy-	LD50 Oral	Rat	2800 mg/kg	-
<b>10X PicoMaxx Reaction Buffer</b> Trometamol	LD50 Dermal LD50 Oral	Rat Rat	>5000 mg/kg 5000 mg/kg	- -

#### Acute toxicity estimates

Not available.

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
<b>PicoMaxx High Fidelity PCR System</b> Poly(oxy-1,2-ethanediyl), . alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-. omega.-hydroxy-	Eyes - Severe irritant	Rabbit	-	1%	-
<b>10X PicoMaxx Reaction Buffer</b> Trometamol	Skin - Moderate irritant Skin - Severe irritant	Rabbit Rabbit	- -	25 Percent 500 milligrams	- -

#### Sensitiser

**Conclusion/Summary** : Not available.

#### Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
<b>10X PicoMaxx Reaction Buffer</b> Trometamol	Category 3	Not applicable.	Respiratory tract irritation

#### Specific target organ toxicity (repeated exposure)

Not available.

#### Aspiration hazard

Not available.

**Information on likely routes of exposure** : PicoMaxx High Fidelity PCR System Routes of entry anticipated: Oral, Dermal, Inhalation.  
10X PicoMaxx Reaction Buffer Routes of entry anticipated: Oral, Dermal, Inhalation.

#### Potential acute health effects

**Inhalation** : PicoMaxx High Fidelity PCR System No known significant effects or critical hazards.  
10X PicoMaxx Reaction Buffer No known significant effects or critical hazards.

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## SECTION 11: Toxicological information

<b>Ingestion</b>	: PicoMaxx High Fidelity PCR System	No known significant effects or critical hazards.
	10X PicoMaxx Reaction Buffer	No known significant effects or critical hazards.
<b>Skin contact</b>	: PicoMaxx High Fidelity PCR System	No known significant effects or critical hazards.
	10X PicoMaxx Reaction Buffer	No known significant effects or critical hazards.
<b>Eye contact</b>	: PicoMaxx High Fidelity PCR System	No known significant effects or critical hazards.
	10X PicoMaxx Reaction Buffer	No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

<b>Inhalation</b>	: PicoMaxx High Fidelity PCR System	No specific data.
	10X PicoMaxx Reaction Buffer	No specific data.
<b>Ingestion</b>	: PicoMaxx High Fidelity PCR System	No specific data.
	10X PicoMaxx Reaction Buffer	No specific data.
<b>Skin contact</b>	: PicoMaxx High Fidelity PCR System	No specific data.
	10X PicoMaxx Reaction Buffer	No specific data.
<b>Eye contact</b>	: PicoMaxx High Fidelity PCR System	No specific data.
	10X PicoMaxx Reaction Buffer	No specific data.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

<b>General</b>	: PicoMaxx High Fidelity PCR System	No known significant effects or critical hazards.
	10X PicoMaxx Reaction Buffer	No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: PicoMaxx High Fidelity PCR System	No known significant effects or critical hazards.
	10X PicoMaxx Reaction Buffer	No known significant effects or critical hazards.
<b>Mutagenicity</b>	: PicoMaxx High Fidelity PCR System	No known significant effects or critical hazards.
	10X PicoMaxx Reaction Buffer	No known significant effects or critical hazards.

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## SECTION 11: Toxicological information

<b>Teratogenicity</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Developmental effects</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Fertility effects</b>	: PicoMaxx High Fidelity PCR System 10X PicoMaxx Reaction Buffer	No known significant effects or critical hazards. No known significant effects or critical hazards.

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
<b>PicoMaxx High Fidelity PCR System</b> Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	Acute EC50 210 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute LC50 10800 µg/l Marine water	Crustaceans - Pandalus montagui - Adult	48 hours
	Acute LC50 8600 to 9800 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 7200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
<b>10X PicoMaxx Reaction Buffer</b> Trometamol	Acute EC50 >980 mg/l Fresh water Acute NOEC 520 mg/l Fresh water	Daphnia Daphnia	48 hours 48 hours

### 12.2 Persistence and degradability

Not available.

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<b>PicoMaxx High Fidelity PCR System</b> Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	3.77	78.67	low
<b>10X PicoMaxx Reaction Buffer</b> Trometamol	-1.56	-	low

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Mobility** : Not available.

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## SECTION 12: Ecological information

### 12.5 Results of PBT and vPvB assessment

- PBT** : Not applicable.  
**vPvB** : Not applicable.

**12.6 Other adverse effects** : No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

- Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.
- Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

#### Packaging

- Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
- Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

**ADR/RID / IMDG / IATA** : Not regulated.

**14.6 Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** : Not available.

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU Regulation (EC) No. 1907/2006 (REACH)

#### Annex XIV - List of substances subject to authorisation

#### Annex XIV

None of the components are listed.

#### Substances of very high concern

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
PicoMaxx High Fidelity PCR System Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	Substance of equivalent concern for environment	Recommended	ED/169/2012	2/10/2014



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## SECTION 15: Regulatory information

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : PicoMaxx High Fidelity PCR System Not applicable.  
10X PicoMaxx Reaction Buffer Not applicable.

### Other EU regulations

#### Ozone depleting substances (1005/2009/EU)

Not listed.

#### Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

#### Seveso Directive

This product is not controlled under the Seveso Directive.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol (Annexes A, B, C, E)

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

**Australia** : Not determined.  
**Canada** : Not determined.  
**China** : Not determined.  
**Europe** : All components are listed or exempted.  
**Japan** : **Japan inventory (ENCS)**: Not determined.  
**Japan inventory (ISHL)**: Not determined.  
**Malaysia** : Not determined.  
**New Zealand** : Not determined.  
**Philippines** : Not determined.  
**Republic of Korea** : Not determined.  
**Taiwan** : All components are listed or exempted.  
**Thailand** : Not determined.  
**Turkey** : Not determined.  
**United States** : All components are listed or exempted.  
**Viet Nam** : Not determined.

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

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## SECTION 16: Other information

✔ Indicates information that has changed from previously issued version.

### Abbreviations and acronyms

: ATE = Acute Toxicity Estimate  
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 PNEC = Predicted No Effect Concentration  
 RRN = REACH Registration Number

### Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Not classified.	

### Full text of abbreviated H statements

<b>PicoMaxx High Fidelity PCR System</b> H315 H318 H411	Causes skin irritation. Causes serious eye damage. Toxic to aquatic life with long lasting effects.
<b>10X PicoMaxx Reaction Buffer</b> H315 H319 H335	Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.

### Full text of classifications [CLP/GHS]

<b>PicoMaxx High Fidelity PCR System</b> Aquatic Chronic 2, H411 Eye Dam. 1, H318 Skin Irrit. 2, H315	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 SKIN CORROSION/IRRITATION - Category 2
<b>10X PicoMaxx Reaction Buffer</b> Eye Irrit. 2, H319 Skin Irrit. 2, H315 STOT SE 3, H335	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 SKIN CORROSION/IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3

**Date of issue/ Date of revision** : 30/06/2017

**Date of previous issue** : No previous validation.

**Version** : 1

### Notice to reader

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